

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended) A cell culture container comprising:

a supporting container comprising a first flexible exterior side wall connected to a portion of an opposing second flexible exterior side wall along a peripheral seal to define a containment area, each side wall having an interior surface, the first side wall being constructed from a gas permeable material selected from the group consisting of: polymeric material, paper, and fabric, the first side wall having a gas permeability sufficient to permit cellular respiration, and the second side wall being constructed from a material selected from the group consisting of: polymeric material, paper, fabric, and foil; and

a fibrin matrix layer on a portion of the interior surface of the first side wall or the second side wall of the supporting container.

Claim 2 (original): The cell culture container of claim 1 wherein the gas permeable material is selected from the group consisting of: ethylene vinyl acetate copolymers, polyolefins, polyamides, polyesters, styrene and hydrocarbon copolymers, and fluorocarbon elastomers.

Claim 3 (original): The cell culture container of claim 1 wherein the polymeric material of the first side wall or the second side wall of the supporting container is a multiple-component polymer blend.

Claim 4 (original): The cell culture container of claim 3 wherein at least one of the components of the multiple-component polymer blend is a styrene and hydrocarbon copolymer.

Claim 5 (original): The cell culture container of claim 1 wherein the gas permeable material is a monolayer structure.

Claim 6 (original): The cell culture container of claim 1 wherein the gas permeable material is a multilayer structure.

Claim 7 (original): The cell culture container of claim 6 wherein the multilayer structure comprises: a first layer comprising a first ethylene vinyl acetate copolymer, the first layer having a first surface and a second surface; and a second layer adhering to the first surface of the first layer, the second layer comprising a second ethylene vinyl acetate copolymer; wherein the second surface of the first layer forms the interior surface of the supporting container.

Claim 8 (original): The cell culture container of claim 7 wherein the first ethylene vinyl acetate copolymer having a vinyl acetate content of greater than 18% by weight of the copolymer.

Claim 9 (original): The cell culture container of claim 7 wherein the second ethylene vinyl acetate copolymer having a vinyl acetate content of less than 18% by weight of the copolymer.

Claim 10 (original): The cell culture container of claim 7 wherein the first ethylene vinyl acetate copolymer having a vinyl acetate content of about 18% by weight of the copolymer.

Claim 11 (original): The cell culture container of claim 7 wherein the second ethylene vinyl acetate copolymer having a vinyl acetate content of about 9% by weight of the copolymer.

Claim 12 (original): The cell culture container of claim 6 wherein the multilayer structure comprises: a first layer comprising polystyrene having a thickness within the range of 0.0001 inches to about 0.0010 inches; and a second layer adhering to the first layer, the second layer comprising a polymeric material selected from the group consisting of ethylene vinyl acetate copolymers, polyolefins, polyamides, polyesters, styrene and hydrocarbon copolymers, fluorocarbon elastomers, the second layer having a thickness within the range of 0.004 inches to about 0.025 inches.

Claim 13 (original): The cell culture container of claim 12, wherein the polymeric material of the second layer is a multi-component polymer blend.

Claim 14 (original): The cell culture container of claim 13, wherein at least one of the components of the multi-component polymer blend is a styrene and hydrocarbon copolymer.

Claim 15 (original): The cell culture container of claim 12, wherein the fibrin matrix is positioned on a portion of the polystyrene layer covering substantially an entire surface of the polystyrene layer.

Claim 16 (original): The cell culture container of claim 1, wherein the second side wall is constructed from a gas permeable material selected from the group consisting of: polymeric materials, paper, and fabric.

Claim 17 (original): The cell culture container of claim 16, wherein the polymeric material of the second side wall is selected from the group consisting of: ethylene vinyl acetate copolymers, polyolefins, polyamides, polyesters, styrene and hydrocarbon copolymers, and fluorocarbon elastomers.

Claim 18 (original): The cell culture container of claim 17, wherein at least one of the components of the multi-component polymer blend is a styrene and hydrocarbon copolymer.

Claim 19 (original): The cell culture container of claim 16, wherein the gas permeable material is a monolayer structure.

Claim 20 (original): The cell culture container of claim 16, wherein the gas permeable material is a multilayer structure.

Claim 21 (previously presented): The cell culture container of claim 20, wherein the multilayer structure comprises: a first layer comprising first ethylene vinyl acetate copolymer with a vinyl acetate content of greater than 18% by weight of the copolymer, the first layer having a first surface and a second surface; and a second layer adhering to the first surface of the first layer, the second layer comprising a second ethylene vinyl acetate copolymer with a vinyl acetate content of from less than 18% by weight of the copolymer, wherein the second surface of the first layer forms the inner surface of the container.

Claim 22 (canceled).

Claim 23 (previously presented): The cell culture container of claim 21 wherein the a vinyl acetate content of the second vinyl acetate copolymer in the second layer is about 9% by weight of the copolymer.

Claim 24 (original): The cell culture container of claim 20, wherein the multilayer structure comprises: a first layer comprising polystyrene having a thickness within the range of 0.0001 inches to about 0.0010 inches; and a second layer adhering to the first layer, the second layer comprising a polymeric material selected from the group consisting of ethylene vinyl acetate copolymers, polyolefins, polyamides, polyesters, styrene and hydrocarbon copolymers, fluorocarbon elastomers, the second layer having a thickness within the range of 0.004 inches to about 0.025 inches.

Claim 25 (original): The cell culture container of claim 24, wherein the polymeric material of the second layer is a multi-component polymer blend.

Claim 26 (original): The cell culture container of claim 25, wherein at least one of the components of the multi-component polymer blend is a styrene and hydrocarbon copolymer.

Claim 27 (original): The cell culture container of claim 1, wherein the container having an oxygen permeability of from about 9 to about 15 Barrers, a carbon dioxide permeability of from about 40 to about 80 Barrers, a nitrogen permeability of from about 10 to about 100 Barrers, and a water vapor transmission rate of less than about 20 (g mil/100 in²/day).

Claim 28 (original): The cell culture container of claim 1, wherein the first side wall and the second side wall having a flexural modulus of from about 10,000 to about 30,000 psi as measured according to ASTM D-790.

Claim 29 (original): The cell culture container of claim 1, wherein at least a portion of the container is optically clear.

Claim 30 (original): The cell culture container of claim 1, wherein a substantial portion of the container is optically clear.

Claim 31 (original): The cell culture container of claim 1, wherein the container is radiation sterilizable.

Claim 32 (original): The cell culture container of claim 1, wherein the container further comprising at least one port providing access to the containment area.

Claim 33 (original): The cell culture container of claim 1, wherein the fibrin matrix extends over substantially an entire surface of the interior surface of at least one of the side walls.

Claim 34 (original): The cell culture container of claim 1, wherein the fibrin matrix is on at least a portion of the interior surface of each of the side walls.

Claim 35 (original): The cell culture container of claim 1, wherein the fibrin matrix is three-dimensional with pore sizes of from about 0.5 to about 5.0 um in diameter.

Claim 36 (original): The cell culture container of claim 1, wherein the fibrin matrix is formed by cross-linking fibrin or fibrinogen.

Claim 37 (original): The cell culture container of claim 1, wherein the fibrin matrix is prepared by mixing a first solution comprising fibrinogen and factor XIII with a second solution comprising thrombin and calcium to form the fibrin matrix.

Claim 38 (original): The cell culture container of claim 37, wherein the fibrinogen is derived from mammalian plasma.

Claim 39 (original): The cell culture container of claim 38, wherein the mammalian plasma is human plasma.

Claim 40 (original): The cell culture container of claim 37, wherein the fibrinogen is a recombinant fibrinogen.

Claim 41 (original): The cell culture container of claim 37, wherein the factor XIII is derived from mammalian plasma.

Claim 42 (original): The cell culture container of claim 41, wherein the mammalian plasma is human plasma.

Claim 43 (original): The cell culture container of claim 37, wherein the factor XIII is a recombinant factor XIII.

Claim 44 (original): The cell culture container of claim 37, wherein the thrombin is derived from mammalian plasma.

Claim 45 (original): The cell culture container of claim 44, wherein the mammalian plasma is selected from the group consisting of bovine plasma and human plasma.

Claim 46 (original): The cell culture container of claim 37, wherein the thrombin is a recombinant thrombin.

Claim 47 (previously presented): The cell culture container of claim 37 wherein the concentration of fibrinogen in the first solution is from about 2.0 to about 20 mg/mL, the concentration of the factor XIII in the first solution is from about 10 to about 40 IU/mL, the concentration of the thrombin in the second solution is from about 2.5 IU/mL to about 50 IU/mL, and the concentration of the calcium in the second solution is from about 40 to about 100 mmoles/mL, about 0.5-1.0 mLs of the first solution is mixed with 0.5-1.0 mLs of the second solution to form a fibrin-forming mixture.

Claim 48 (currently amended): A cell culture container comprising:
a supporting container comprising a first flexible exterior side wall connected to a portion of an opposing second flexible exterior side wall along a peripheral seal to define a containment area, each side wall having an interior surface, the first side wall and the second side wall are constructed from an ethylene vinyl acetate copolymer having a gas permeability sufficient to permit cellular respiration; and
a fibrin matrix layer on a portion of the interior surface of the first side wall or the second side wall of the supporting container.

Claim 49 (previously presented): The cell culture container of claim 48, wherein the ethylene vinyl acetate copolymer is a multilayer structure comprising: a first layer comprising a first ethylene vinyl acetate copolymer with a vinyl acetate content of greater than 18% by weight of the copolymer, the first layer having a first surface and a second surface; and a second layer adhering to the first surface of the first layer, the second layer comprising a second ethylene vinyl acetate copolymer with a vinyl acetate content of less than 18% by weight of the copolymer; wherein the second surface of the first layer forms the interior surface of the supporting container.

Claim 50 (previously presented): The cell culture container of claim 48, wherein the vinyl acetate content of the second ethylene vinyl acetate copolymer is about 9% by weight of the copolymer.

Claim 51 (currently amended): A cell culture container comprising:
a supporting container comprising a first flexible exterior side wall connected to a portion of an opposing second flexible exterior side wall along a peripheral seal to define a containment area, each side wall having an interior surface, the side walls are constructed from a multilayer gas permeable polymeric structure having a gas permeability sufficient to permit cellular respiration, and the multilayer polymeric structure comprising: a first layer comprising polystyrene having a thickness within the range of 0.0001 inches to about 0.0010 inches; and a second layer adhering to the first layer, the second layer comprising a polymeric material selected from the group consisting of ethylene vinyl acetate copolymers, polyolefins, polyamides, polystyrene and hydrocarbon copolymers, the second layer having a thickness within the range of 0.004 inches to about 0.025 inches; and
a fibrin matrix layer on a portion of the interior surface of the first side wall or the second side wall of the supporting container.

Claim 52 (original): The cell culture container of claim 51, wherein the polymeric material of the second layer is a multi-component polymer blend.

Claim 53 (original): The cell culture container of claim 52, wherein at least one of the components of the multi-component polymer blend is a styrene and hydrocarbon copolymer.

Claims 54-120 (canceled)